

**Set Name**   **Query**  
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result set

*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ*

<u>L9</u>	styrene and butyl acrylate and collagen fiber [clm]	0	<u>L9</u>
<u>L8</u>	styrene and butyl acrylate and collagen fiber [ab]	0	<u>L8</u>
<u>L7</u>	styrene and butyl acrylate and collagen fiber [ti]	0	<u>L7</u>
<u>L6</u>	styrene and butyl acrylate [ti]	157	<u>L6</u>
<u>L5</u>	l1 and l3	10	<u>L5</u>
<u>L4</u>	l1 and l2	8	<u>L4</u>
<u>L3</u>	methyl methacrylate and butyl acrylate	21024	<u>L3</u>
<u>L2</u>	styrene and butyl acrylate	24493	<u>L2</u>
<u>L1</u>	collagen fiber	3239	<u>L1</u>

END OF SEARCH HISTORY

10/03/290

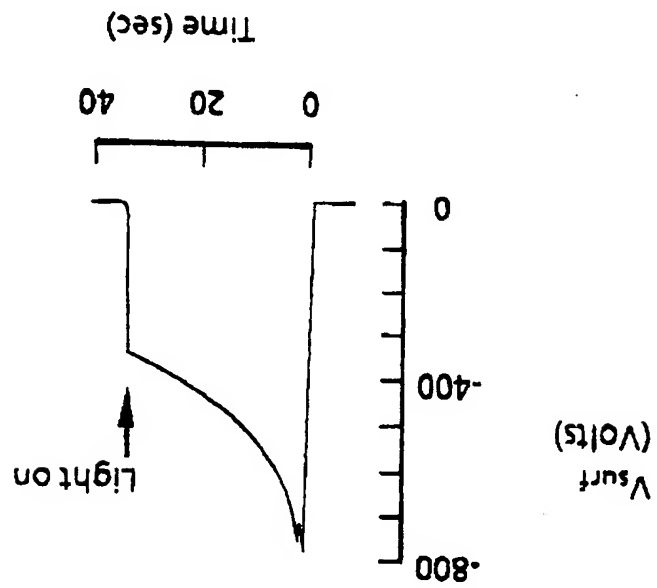


FIG. 2

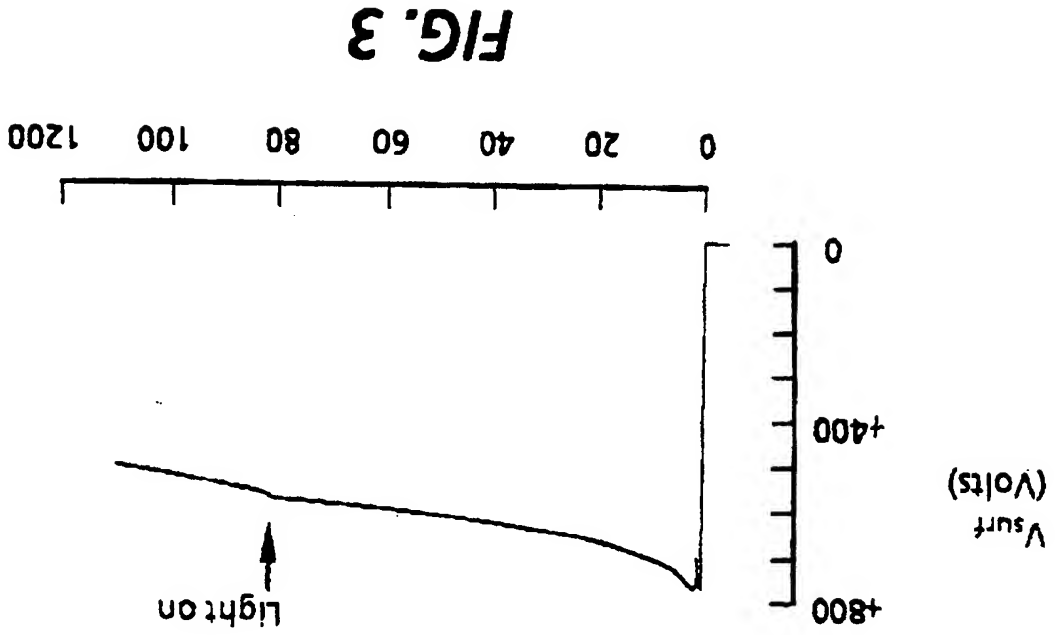


FIG. 3

**WEST**

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**Search Results - Record(s) 1 through 8 of 8 returned.**☐ 1. Document ID: US 20020165206 A1

L4: Entry 1 of 8

File: PGPB

Nov 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020165206

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020165206 A1

TITLE: Inhibitory or blocking agents of molecular generating and/or inducing functions

PUBLICATION-DATE: November 7, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Koyama, Shozo	Matsumoto-shi		JP	
Yamaguchi, Yoshihiro	Matsumoto-shi		JP	

US-CL-CURRENT: 514/125; 514/461, 514/532, 514/683, 514/690

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw. Desc	Image										

☐ 2. Document ID: US 20020131948 A1

L4: Entry 2 of 8

File: PGPB

Sep 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020131948

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020131948 A1

TITLE: Tightening agent comprising at least one grafted silicone polymer

PUBLICATION-DATE: September 19, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Toumi, Beatrice	La Garenne Colombes		FR	
Garson, Jean-Claude	Suresnes		FR	
Mougin, Nathalie	Paris		FR	

US-CL-CURRENT: 424/70.12; 424/401

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC
Draw. Desc	Image										

☐ 3. Document ID: US 6346551 B1

76-Nov 01

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1-17 ~~are~~ drawn to a rubber composition, classified in class 524, subclass 496.
- II. Claims 18-20 ~~are~~ drawn to a tire, classified in class 152, subclass 216.

The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final

product relationship. Distinctness is proven for claims in this relationship if the intermediate

product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and

the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate

product is deemed to be useful as a base to make hoses, belts etc. and the inventions are deemed

patentably distinct since there is nothing on this record to show them to be obvious variants.

Should applicant traverse on the ground that the species are not patentably distinct, applicant

should submit evidence or identify such evidence now of record showing the species to be

obvious variants or clearly admit on the record that this is the case. In either instance, if the

examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be

used in a rejection under 35 U.S.C. 103(a) of the other invention.

Because these inventions are distinct for the reasons given above and have acquired a

separate status in the art as shown by their different classification, restriction for examination

purposes as indicated is proper.

L4: Entry 3 of 8

File: USPT

Feb 12, 2002

US-PAT-NO: 6346551

DOCUMENT-IDENTIFIER: US 6346551 B1

TITLE: Inhibitory or blocking agents of molecular generating and/or inducing functions

DATE-ISSUED: February 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Koyoma; Shozo	Matsumoto-shi, Nagano		390-02	JP
Yamaguchi; Yoshihiro	Matsumoto-shi, Nagano		390	JP

US-CL-CURRENT: 514/690; 568/377

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC
Draw	Desc	Image									

☐ 4. Document ID: US 5709714 A

L4: Entry 4 of 8

File: USPT

Jan 20, 1998

US-PAT-NO: 5709714

DOCUMENT-IDENTIFIER: US 5709714 A

TITLE: Method of treating leather with amphoteric polymers

DATE-ISSUED: January 20, 1998

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Natoli; John	Ambler	PA		
Volpe, Jr.; Anthony Frank	Lansdale	PA		

US-CL-CURRENT: 8/94.21; 8/436, 8/94.22, 8/94.23, 8/94.33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC
Draw	Desc	Image									

☐ 5. Document ID: US 5330537 A

L4: Entry 5 of 8

File: USPT

Jul 19, 1994

US-PAT-NO: 5330537

DOCUMENT-IDENTIFIER: US 5330537 A

TITLE: Leather treatment selected amphiphilic copolymer

DATE-ISSUED: July 19, 1994

## INVENTOR-INFORMATION:

Art Unit: 1711

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Attorney Alvin T. Rockhill on Nov. 01, 2001 a provisional election was made with traverse to prosecute the invention of I, claims 1-17.

Affirmation of this election must be made by applicant in replying to this Office action. Claim -20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1,5-7,9,10,14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim I is vague in reciting "isoprene butadiene rubber"

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stewart; Thomas	Doylestown	PA		
Lekso; Patricia M.	Lansdale	PA		
El A'mma; Anton G.	Phoenixville	PA		

US-CL-CURRENT: 8/94.1R

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 6. Document ID: US 5316860 A

L4: Entry 6 of 8

File: USPT

May 31, 1994

US-PAT-NO: 5316860

DOCUMENT-IDENTIFIER: US 5316860 A

TITLE: Leather treatment selected amphiphilic copolymers

DATE-ISSUED: May 31, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stewart; Thomas	Doylestown	PA		
Lesko; Patricia M.	Lansdale	PA		
El A'mma; Anton G.	Phoenixville	PA		

US-CL-CURRENT: 428/473; 427/389, 428/521, 428/522, 8/94.1R, 8/94.21, 8/94.33

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

☐ 7. Document ID: US 4770665 A

L4: Entry 7 of 8

File: USPT

Sep 13, 1988

US-PAT-NO: 4770665

DOCUMENT-IDENTIFIER: US 4770665 A

TITLE: Elastomeric polymer incorporation into implantable biological tissue to inhibit calcification

DATE-ISSUED: September 13, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nashef; Aws S.	Costa Mesa	CA		

US-CL-CURRENT: 8/94.11; 600/36, 623/916, 8/94.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
Draw Desc	Image									

Art Unit: 1711

on line 14.

Claims 1,5,7,9 are indefinite because they encompass abbreviations: DBP" and "CTAB"

which are not permitted.

Claim I is indefinite because of "high <sup>cis-</sup>1,4-polybutadiene rubber". How high is high?

Same is case with claims ~~6 and 10~~ <sup>6 and 10</sup>

Claims 14&15 are indefinite in reciting "medium" on line 3 of each

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halasa et al

(USP 5047483) in view of Zanzig et al (USP 5504140), Ender et al (USP 5132357) and Halasa

et al. (USP 554592) (All references are record on PTO-1449, paper no. 3). Halasa discloses a

terpolymer a styrene, isoprene and butadiene and tire treads made therefrom. Such a tread is a

composition comprised of (A) the terpolymer (10-90 parts by wt) and (B) cis - 1, 4 polyisoprene

rubber or cis - 1,4- polybutadiene rubber (col. 2, line 22-30). Terpolymer has a <sup>Tg</sup> of -10° degrees

Celsius to -40°degrees Celsius (col 1, lines 65-68). A processing oil is used at 10-50 parts ( col.

3, lines 5-10). Also used are silica and carbon black (col. 3, lines 18-22)

Halasa '483 does not disclose glass transition temperature of cis-1,4-polybutadiene, DBP

absorption value and CTAB absorption area/carbon black.



☐ 8. Document ID: US 4526581 A

L4: Entry 8 of 8

File: USPT

Jul 2, 1985

US-PAT-NO: 4526581  
DOCUMENT-IDENTIFIER: US 4526581 A  
  
TITLE: Process for producing leather  
  
DATE-ISSUED: July 2, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Prentiss; William C.	New Britain	PA		
Price; David N.	Norristown	PA		

US-CL-CURRENT: 8/94.33; 8/94.21

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KWIC
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Term	Documents
(1 AND 2).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	8
(L1 AND L2).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	8

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[Previous Page](#)

[Next Page](#)

Art Unit: 1711

According to Zanzig, a blend of rubber composed of at least two elastomers having different ranges of glass transition ~~temperatures~~ <sup>temperatures</sup> produces tires with ~~treads~~ <sup>treads</sup> with improved mechanical properties.

Endter discloses ~~tread~~ <sup>rubber</sup> employing high structured carbon black. The carbon black

has a DBPA of 140-185 ~~cm<sup>3</sup>/100g~~ <sup>cm<sup>3</sup>/100g</sup> and CTAB of 65-140 mg/g (col 4, lines 50-63).

Halasa '592 discloses high performance blend for tire ~~treads~~ <sup>treads</sup>. Such a blend is comprised of vinyl polybutadiene rubbers having different vinyl contents ranging from 8-100% (col. 15, lines

10-44).

Therefore, ~~it~~ <sup>it</sup> would have been obvious to use in the composition of Halasa '483 the cis-

1,4-polybutadiene rubber having a different glass transition temperature than the terpolymer ~~(a)~~ <sup>(a)</sup>,

the carbon black of (claimed) DBPA and CTAB and vinyl-butadiene rubber as additional rubbery polymer with the expectation of producing a tire having better traction, ~~tread wear~~ <sup>tread wear</sup> and/or rolling

resistance and lower irregular wear.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to U.K. Rajguru whose telephone number is (703) 308-3224. The examiner

can normally be reached on Monday-Friday from 9:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

James J. Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization

where this application or proceeding is assigned is (703) 872-9310/9311.

**WEST****End of Result Set**

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L5: Entry 10 of 10

File: USPT

Feb 9, 1982

*Monsheimer*

DOCUMENT-IDENTIFIER: US 4314800 A

TITLE: Method for treating pelts and leather

Brief Summary Text (9):

For a long time now, the possibility has been investigated of compensating structural differences in skins resulting from, for example, the non-uniform structure of the collagen fiber network in various parts of the skins, through the inclusion of foreign matter. In this respect, special attention has been given to the use of resins obtained by condensing formaldehyde with urea, thiourea, melamine, or dicyanamide. "Resin tannings" of this nature, however, have the disadvantage of being tannings which can readily lead to a possible hardening of the leather. There are also numerous research efforts concerning the use of acrylic and methacrylic acids and their derivatives in the tannery. Methods involving the inclusion of polymers comprising acrylic and methacrylic acid ester in vegetable-tanned leathers have been rejected because they were too complicated and expensive; moreover, they impaired the absorption of water vapor and caused too great a stiffening of the leather. Further attempts to obtain a tanning effect were made with polymerizable substances on untanned skins. However, the resulting leather was too "empty", and neither the tanning process nor a similarly obtained "bottom leather impregnation" gained status as a standard practice [cf. W. Pauckner, Leder- und Haeutemarkt 51, 607-619 (1976)].

Brief Summary Text (10):

Recent research has been aimed at overcoming the difficulties indicated. In the first place, attempts were made to include commonly available polymerized polymer derivatives in split bull hides and sheepskins. The introduction of these commercially available products takes place after the wetting-back (normal wet-back) of the intermediately dried leather, whereby between 1 and 5 percent of dry solids, by dry weight of the leather, are applied. In further tests, monomers were included and their polymerization carried out in the leather itself. As components of the homopolymer derivatives, methyl methacrylate, ethyl acrylate, and butyl acrylate were used. The copolymers used were also formed from the monomers mentioned. Acrylic acid and methacrylic acid in amounts totalling 7 percent were added to the polymers of ethyl acrylate and butyl acrylate. According to Pauckner (loc. cit.), the use of butyl acrylate entails disadvantages for several reasons. Thus, when using products consisting of pure butyl acrylate or copolymers containing a large amount of butyl acrylate, it becomes clear that the water absorption by the leather becomes less and less, because the capacity of the leather to swell, or to absorb water, is greatly diminished by the butyl residue.

Brief Summary Text (13):

From works by Trakhtenberg et al. it is known that casein or collagen hydrolyzate modified by methyl acrylate and/or butyl acrylate is used as a leather finish. (Cf. Chem. Abstr. 62, 6681a; 60, 9493, 62, 16 527 g, 75, 64 675, USSR-PS 171 564).

Brief Summary Text (22):

A polymer which is particularly preferred comprises butyl acrylate, methyl methacrylate, dimethylaminoethyl acrylate, and acrylic acid, especially in the respective proportions of (70-85):(5-15):(5-15):(1-5), wherein the ranges given are percentages by weight of all the monomers employed.

Detailed Description Text (5):

625.0 g of butyl acrylate,

Detailed Description Text (6):

75.0 g of methyl methacrylate,

Art Unit: 1711

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

U.K. Rajguru/ng

November 16, 2001

Detailed Description Text (20):312 g of butyl acrylate,Detailed Description Text (21):37 g of methyl methacrylate,Detailed Description Paragraph Table (1):

															Parts by	
Weight	Ex.	MMA	BA	EHA	DMM	DPM	AA	MA	*	--	M.sub.w					
															2	29 -- 58.2
10	--	--	2.8	--	5(10.sup.5)	3	8	76	--	--	13	--	3	--	2.5(10.sup.5)	4 9 76 -- -- 12.5 2.5
--	--	--	2.1(10.sup.5)		5	8	76	--	--	--	3	13	--	6	8 76 -- -- -- -- 3 13 --	
															*(Ex. 5) =	
3(N,N-dimethylamino)benzyl methacrylate *(Ex. 6) = 1methacryloxy-3-(N-methyl, Nethyl																
amino)3,5,5-trimethylcyclohexane MMA = methyl methacrylate BA = butyl acrylate EHA =																
2ethylhexyl acrylate DMM = 2dimethylaminoethyl methacrylate DPM =																
3dimethylamino-2,3-dimethylpropyl methacrylate AA = acrylic acid MA = methacrylic acid																

## CLAIMS:

5. A method as in claim 1 wherein said copolymer is a copolymer of butyl acrylate, methyl methacrylate, dimethylaminoethyl methacrylate, and acrylic acid in a ratio by weight of (70 to 85):(5 to 15):(5 to 15):(1 to 5).



US005510879A

United States Patent [19]  
Facet et al. [45]  
Patent Number: 5,510,879  
Date of Patent: Apr. 23, 1996

[54] PHOTOCOCONDUCTIVE CHARGING PROCESSES

[75] Inventors: John S. Facet, Webster, Richard B. Lewis, Williamson, Milan Stotka, Faltpor, Martin A. Abkowitz, Michael J. Levy, both of Webster; Joseph Mammimo, Penfield; Michael M. Shabin, Pittsford, all of N.Y.

[73] Assignee: Xerox Corporation, Stamford, Conn.

[21] Appl. No.: 250,749  
[22] Filed: May 27, 1994  
[51] Int. Cl.<sup>6</sup> G03G 15/02; G03G 13/02  
[52] U.S. Cl. 355/219; 361/225; 430/902  
[58] Field of Search 355/219; 361/225; 430/902  
[56] References Cited  
U.S. PATENT DOCUMENTS  
2,904,431 9/1959 Mouchette-Yeates.  
A process for charging layered imaging members by the transfer of ions thereto from an ionically conductive medium.  
[57] ABSTRACT  
Primary Examiner—Joan H. Pendegrass  
Attorney, Agent, or Firm—E. O. Palazzo  
M. Stark, Walter de Gruyter, 1972, p. 328.  
Current Problems in Electrophotography, R. B. Lewis & H. Corona Discharge and Their Application to Electrophotography, Michael M. Shabin, vol. 15, No. 4, Jul.-Aug. 1971, pp. 322-328.

OTHER PUBLICATIONS

2,987,660 6/1961 Walkup.  
3,394,002 7/1968 Bickmore.  
4,086,650 4/1978 Davis et al.  
4,265,990 5/1981 Stotka et al.  
4,585,320 4/1986 Alavella et al.  
5,377,070 12/1994 Kawamoto  
355/219 X 355/219 CH 355/3 CH 430/59 361/229 96/1

13 Claims, 2 Drawing Sheets

5, 10, 12, 15, 18